

Appl. No. : 09/380,412
Filed : January 19, 2000

SUMMARY OF INTERVIEW

The undersigned representative of Applicant wishes to thank the Examiner for the telephonic interview conducted on February 2, 2004.

Identification of Claims Discussed

Claim 12 and proposed new Claim 27 were discussed.

Identification of Prior Art Discussed

U.S. Patent No. 5,675,629 to Raffel, et al., and U.S. Patent No. 5,617,467 to Bacher, et al.

Proposed Amendments

Applicant's representative proposed the above amendment to Claim 12 to clarify that "the authentication is performed without accessing a home location register in a mobile communication system". Also proposed was a new Claim 27, which recites the method of previously pending Claim 12, wherein the first and second identification modules are more particularly SIM cards.

Argument Summary and Other Matters

In regard to amended Claim 12, Applicant's representative presented arguments directed to the failure of Raffel to teach that the authentication performed at the base station is performed without accessing a home location register in a mobile communication system. In contrast to the method of amended Claim 12, the base station in Raffel communicates with the cellular network as illustrated in Figure 15.

In regard to new Claim 27, arguments were directed to the failure of the prior art of record to teach reading and writing from and to, respectively, a subscriber identity module (SIM) or chip card through a read and write unit of the base station. Particularly, the Examiner had referenced the read-write memory of Bacher as teaching reading and writing from and to a first identification module through a read and write unit of the base station. However, Bacher does not teach reading and writing from and to a SIM or chip card.

Results of Interview

Agreement was reached with Examiner Mehrpour as to the failure of Raffel to teach or suggest the method of amended Claim 12, and the failure of the combination of Raffel and Bacher to teach reading and writing from and to a SIM card as recited in the method of new Claim 27.

REMARKS

In the outstanding Office Action, the Examiner has rejected Claims 12-26. Claims 12, 20, 25, and 26 have been amended, and new Claim 27 has been added. No new matter has been added. Thus, Claims 12-27 are presented for further examination. Reconsideration and allowance of all Claims 12-27 in light of the present remarks is respectfully requested.

Discussion of Claim Rejections Under 35 U.S.C. § 103(a)

Claim 26

The Examiner has rejected Claim 26 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,675,629 to Raffel, et al. in view of U.S. Patent No. 5,617,467 to Bacher, et al.

Regarding Claim 26, the Examiner stated that "Raffel teaches a system for the operation of a mobile terminal of a mobile communication system with a base station that is connected to a public fixed network and that is compatible at an air interface with the mobile communication system that has at least one authentication function ... (col. 2 lines 25-35) comprising: ... authenticating the mobile terminal with regard to the base station through [a] first authentication result (mobile) and [a] second authentication result (base station), wherein the base station fulfills an access-authorized mobile terminal (col. 30, lines 43-58); ... wherein the base station fulfills the same functions and tasks with respect to access control and authentication as the home location register (col. 25, lines 38-59) and, respectively, the authentication center of the mobile communication system." The Examiner further stated that "Raffel teaches a cordless system that works with [a] cellular system, and the cellular system usually contains the HLR/VLR/AUC (col. 34, lines 61-66)."

The Examiner recognized that Raffel fails to teach a read and write unit at the base station, but stated that "Bacher teaches a read/write unit within a base station which is configured to read and write information from and to and processing data read from the identification module through software implemented in the base station (see figure 1, read/write memory, col. 5, lines 45-55)."

To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 180 U.S.P.Q. 580.

Amended Claim 26 recites a method of operating a cordless communication system comprising a mobile terminal of a public mobile communication system and having a base station which is connectable to a public fixed network and compatible at an air interface with the

mobile communication system that has at least one authentication function, comprising, *inter alia*, “authenticating the mobile terminal with regard to the base station using [] first and second authentication results, wherein the base station fulfills the same functions and tasks with respect to access control and authentication as a home location register and, respectively, an authentication center of the mobile communication system, and wherein the authentication is performed without accessing a home location register in a mobile communication system”.

Raffel describes a cordless cellular base station capable of communicating with a cellular network compatible mobile station. *Raffel at col. 10, lines 53-55*. Raffel further teaches a mobile station registered with a cellular network and assigned a mobile station identification number (MIN). *Col. 10, lines 65-67*. The cordless cellular base station maintains a cordless cellular base station registration list which stores the MIN of the mobile stations which have been previously granted registration privileges with the cordless cellular base station. *Col. 25, lines 26-32*. In the event a mobile station attempts to register with a cordless cellular base station, the cordless cellular base station accepts or rejects the attempted registration based on whether the mobile station identification number (MIN) of the mobile station matches a MIN stored in the automatic registration list in the cordless cellular base station. *Col. 30, lines 43-58*. When the mobile station has registered with the cordless cellular base station, the mobile station functions as a cordless telephone mobile station operating in the cordless telephone landline service mode. *Col. 32, lines 8-11*.

Applicant respectfully disagrees with the Examiner’s assertion that Raffel teaches a cordless communication system “wherein the base station fulfills the same functions and tasks with respect to ... authentication as the authentication center of the mobile communication system”, and further submits that Raffel fails to teach that “the authentication is performed without accessing a home location register in a mobile communication system” as recited in amended Claim 26. In contrast, Raffel teaches an authentication step (AUTH) 208 wherein the cordless cellular base station sends an authentication message to the cellular network 16. *Col. 32, lines 50-59; Fig. 14a*. The cellular network 16 verifies that the mobile system identification number of the registered mobile station matches the stored value in the cellular network 16. *Col. 32, line 59 – col. 33, line 2*. If the authentication message cannot be validated, the cellular network 16 breaks the modem connection and releases the call. *Col. 33, lines 8-11*. Furthermore, Raffel teaches that the cellular network 16 sends the cordless cellular base station

an authorization message, which includes a list of authorized or operational parameters. *Col. 34, lines 8-14*. Applicant respectfully submits that the cordless cellular base station taught by Raffel cannot fulfill the same functions and tasks with respect to access control and authentication as a home location register and, respectively, an authentication center of the mobile communication system because, if the cordless cellular base station fulfilled such tasks it would not have to communicate with the cellular communication network 16.

In addition, Raffel simply states that the cellular network 16 "can be broken down into the following components: the mobile switching complex (MSC) 222, the home location register (HLR) 224, a traditional visitor location register (VLR) 226 and the cordless cellular base station visitor location register (CCBS VLR) 228." *Raffel at col. 34, lines 61-66; Fig. 15*. As described in Raffel, when the cordless cellular base station calls the cellular network 16, it communicates with the CCBS VLR 228, which communicates with the HLR 224. *Col. 35, lines 8-40*. Thus, Applicant respectfully submits that Raffel fails to teach that the authentication is performed without accessing a home location register in a mobile communication system as recited in amended Claim 26.

Thus, as the combination of Raffel and Bacher fails to teach or suggest every element as set forth in amended Claim 26, Applicant respectfully submits Claim 26 for further review as patentable subject matter.

Claims 12-20, 22, 23-25

The Examiner has rejected Claims 12-20, 22, 25 under 35 U.S.C. § 103(a) as being unpatentable over Raffel in view of Bacher, and further in view of U.S. Patent No. 5,642,401 to Yahagi.

Regarding Claims 12-13 and 20, the Examiner stated that Raffel teaches a cordless communication system as described with respect to the rejection of Claim 26, "wherein the base station fulfills the same functions and tasks with respect to access control and authentication as the home location register (col. 25, lines 38-59) and, respectively, the authentication center of the mobile communication system (col. 7, lines 15-25)." The Examiner recognized that Raffel fails to teach a read and write unit of the base station, but stated that "Bacher teaches a read/write unit within a base station which [is] configured to read and write information from and to and processing data read from the identification module through software implemented in the base

station (col. 5, lines 45-55). The Examiner further recognized that the combination of Raffel and Bacher fails to teach using a random number generated at the base station, so as to generate a first authentication result. However, the Examiner stated that "Yahagi teaches using a random number generated at the base station, so as to generate the authentication result (col. 3, lines 60-67, col. 4, lines 105, col. 4, lines 26-35, col. 5 lines 30-43).

To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 180 U.S.P.Q. 580.

Amended Claim 12 recites a method of operating a cordless communication system comprising a mobile terminal of a public mobile communication system and having a base station which is connectable to a public fixed network and compatible at an air interface with the mobile communication system that has at least one authentication function. The method comprises, *inter alia*, "authenticating the mobile terminal with regard to the base station through the first authentication result and the second authentication result, wherein the base station fulfills the same functions and tasks with respect to access control and authentication as a home location register and, respectively, an authentication center of the mobile communication system, and wherein the authentication is performed without accessing a home location register in a mobile communication system".

As discussed above with respect to amended Claim 26, Applicant respectfully submits that Raffel fails to teach or suggest that "the base station fulfills the same functions and tasks with respect to access control and authentication as a home location register and, respectively, an authentication center of the mobile communication system, and wherein the authentication is performed without accessing a home location register in a mobile communication system", as recited in amended Claim 12. In addition, Yahagi fails to cure this deficiency in Raffel as Yahagi is directed to only a mobile communication system and not a cordless communication system having a base station connectable to a public fixed network.

Thus, as the prior art of record fails to teach or suggest every element as recited in amended Claim 12, Applicant respectfully submits Claim 12 for further review as patentable subject matter.

As amended Claims 20 and 25 recite limitations similar to those recited in the method of Claim 12, the arguments with respect to Claim 12 similarly apply to Claims 20 and 25, and thus, Claims 20 and 25 are respectfully submitted for further review as patentable subject matter.

Because Claims 13-19, and 22, depend from Claims 12 and 20, pursuant to 35 U.S.C. § 112, ¶ 4, they incorporate by reference all the limitations of the claim to which they refer. It is therefore submitted that these claims are in condition for allowance at least for the reasons expressed with respect to the independent claim, and for their other features.

Claims 21, 23-24

The Examiner has rejected Claims 21, and 23-24 under 35 U.S.C. § 103(a) as being unpatentable over Raffel in view of Bacher, Yahagi, and U.S. Patent No. 6,167,271 to Parker.

Regarding Claim 21, the Examiner recognized that the combination of Raffel, Bacher, and Yahagi fails to teach a cordless communication system wherein the first identification module is a chip card configured for a predetermined standard. However the Examiner stated that "Parker teaches that the wireless communication system wherein the identification module is a chip card configured for a predetermined standard (col. 7, lines 30-60)." The Examiner further asserted that "it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teaching of Parker with the combination of Raffel, Bacher and Yahagi, in order to provide [an] authentication method for a single telephone system for both mobile and stationary subscribers, which does not require any means for storing an authentication random number corresponding [to] each mobile station and also [to] provide an advance authentication calculation result."

Bacher teaches a communication system for connection to a base station of a multi-cellular wireless telephone system, wherein the base station includes a read-write memory (RAM). *Col. 5, lines 50-55; Fig. 1*. Parker describes an interface between cellular and wired networks with enhanced subscriber mobility, wherein a Terminal Adapter Controller (TAC) 34 functions as a Base Transceiver Station (BTS) with wired connections to a GSM Wired Terminal Adapter (TA) 36, which functions like a mobile subscriber. *Col. 3, lines 45-53; Fig. 1*. The TA 36 includes a SIM interface 122 and a switched SIM interface 125, a SIM 111a plugged into the SIM interface 122, and a SIM 111b plugged into the switched SIM interface 125. *Col. 5, lines 10-15; col. 7, lines 10-22; Fig. 3*.

Parker, however, fails to teach a read/write unit within a base station, wherein the read/write unit is configured to read and write information from and to, respectively, a chip card configured for a predetermined standard, as recited in Claim 21. In contrast, Parker teaches the

use of a SIM and SIM interface at a terminal adapter, which functions like a mobile subscriber and not a base station. Thus, Parker fails to teach that an identification module at a base station is a chip card.

Because Claims 21, 23, 24, depend from Claim 20, pursuant to 35 U.S.C. § 112, ¶ 4, they incorporate by reference all the limitations of the claim to which they refer. It is therefore submitted that these claims are in condition for allowance at least for the reasons expressed with respect to the independent claim, and for their other features.

Discussion of New Claim

New Claim 27 has been added and recites a method of operating a cordless communication system, comprising, *inter alia*, “reading and writing from and to, respectively, at least a first subscriber identity module (SIM) card through a read and write unit of the base station, wherein sections of data of the first SIM card used in the base station are identical to sections of data stored on a second SIM card of an access-authorized mobile terminal”. Support for the SIM card feature can be found in Applicant’s specification at page 2, lines 3-4, 18-19, and page 5, lines 9-11, 14-15, for example.

To establish a *prima facie* case of obviousness, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings, and the prior art references, when combined, must teach or suggest all the claim limitations. M.P.E.P. § 2143. Also, the teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant’s disclosure. *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991).

As discussed above with respect to Claim 21, Parker fails to teach the use of a SIM card at a base station, and Bacher merely teaches the use of a RAM at a base station, wherein the RAM is not capable of reading and writing from and to a SIM card. Thus, Applicant respectfully submits that the prior art of record fails to teach or suggest reading and writing from and to, respectively, at least a first SIM card through a read and write unit of a base station, as recited in new Claim 27. Therefore, Applicant respectfully submits that new Claim 27 is in condition for allowance.

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CONCLUSION

Applicant has endeavored to address all of the Examiner's concerns as expressed in the outstanding Office Action. Accordingly, amendments to the claims for patentability purposes pursuant to statutory section 103, the reasons therefor, and arguments in support of the patentability of the pending claim set are presented above. In light of these amendments and remarks, reconsideration and withdrawal of the outstanding rejections is respectfully requested.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

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By: _____

John M. Carson
Registration No. 34,303
Attorney of Record
Customer No. 20,995
(619) 235-8550

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